Red Willow Reservoir
2010 Fall Survey Summary

Nebraska Game and Parks Commission Caleb Huber, Fisheries Biologist

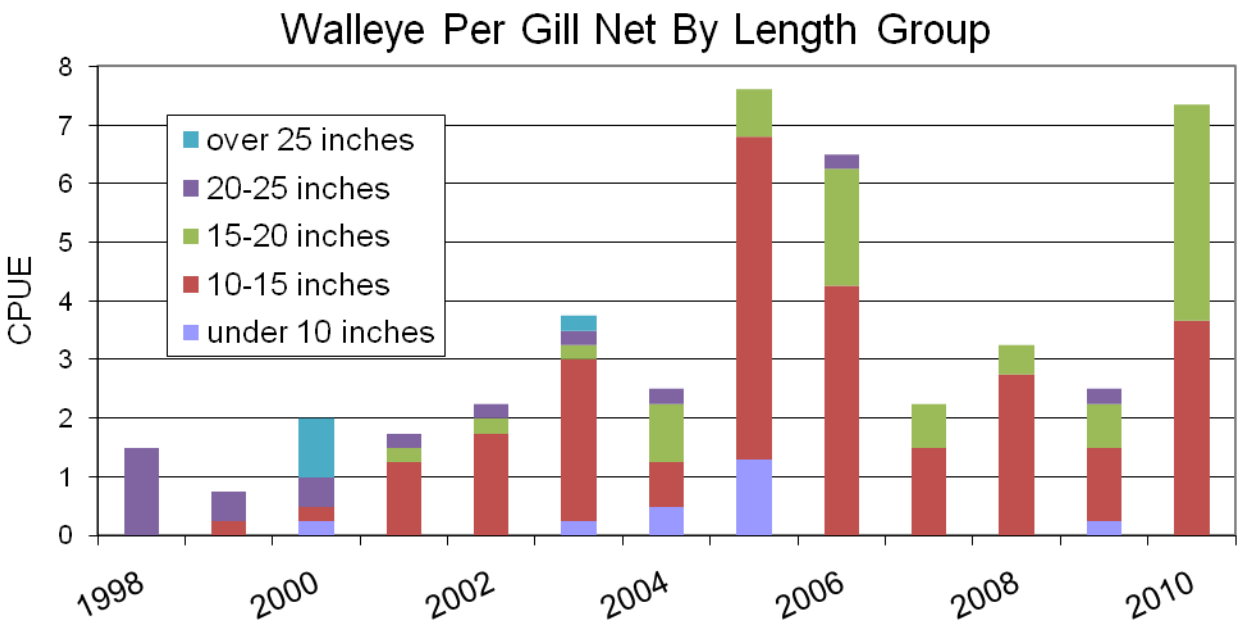
Red Willow began experiencing a low water levels in November of 2009. Currently, water is being released and the reservoir will be held somewhere between 2552-54 feet above msl. The releases were made due to dam safety issues and the water level will likely remain low until repairs are completed. At this elevation the reservoir is approximately 550 surface acres with a volume of 5185 acre-feet. It is possible that the fishery will be negatively impacted, but biologists are unsure what the exact effects will be. Based on observations during 2010, anglers were very successful and reduced the fish biomass substantially. This is probably a good thing in order to reduce fish populations to the lower carrying capacity. Currently, it appears that the Red Willow dam will be repaired, but it might be 3-5 years before repairs are completed and the reservoir is filled to a level resembling past lake levels.

Wiper populations have been slowly declining at Red Willow even though the number of large fish sampled and master angler fish still remain high . Wipers continue to be a priority species at Red Willow due to past success and angler popularity. Normally, wipers are stocked annually, but were not stocked in 2009 due to limited availability. Currently, fish stockings have been put on hold in anticipation of an extended drawdown. Walleye numbers continue to be low when compared to other reservoirs in the area; however, anglers have still been having good success in spite of decreased net catches. Channel catfish numbers were also good with moderate numbers and size structure. Right now biologists are planning in the future to take advantage of the submerged trees and vegetation that will be available when the reservoir refills. Hopefully, biologists will be able to establish and maintain a panfish fishery for several years in along with walleye, white bass and wipers.

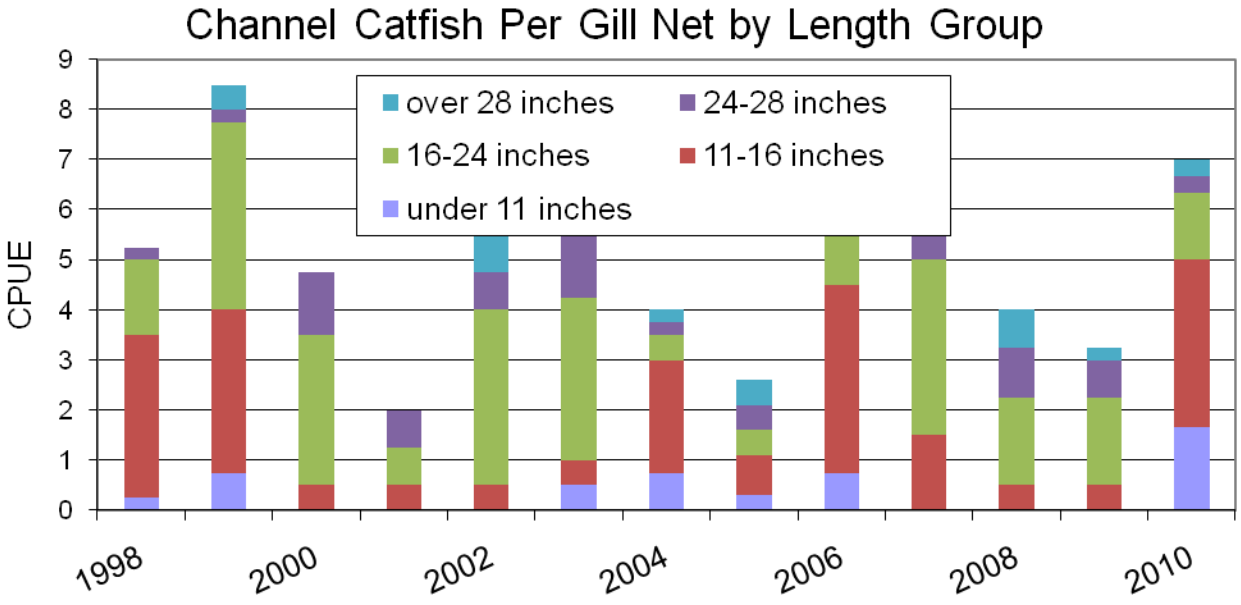
Red Willow may be a hot spot for ice fishing due to the concentration of fish as a result of the current drawdown. Species of interest will include panfish and walleye, but anglers should not overlook the possibility of catching other gamefish through the ice

The following text and graphs are the result of netting surveys completed during 2010 at Red Willow Reservoir. For comparative purposes graphs also show results from previous years. Fish populations are sampled each fall at Red Willow using gill nets, a method commonly used to sample fish found primarily in open water, such as walleye, white bass, and wipers.

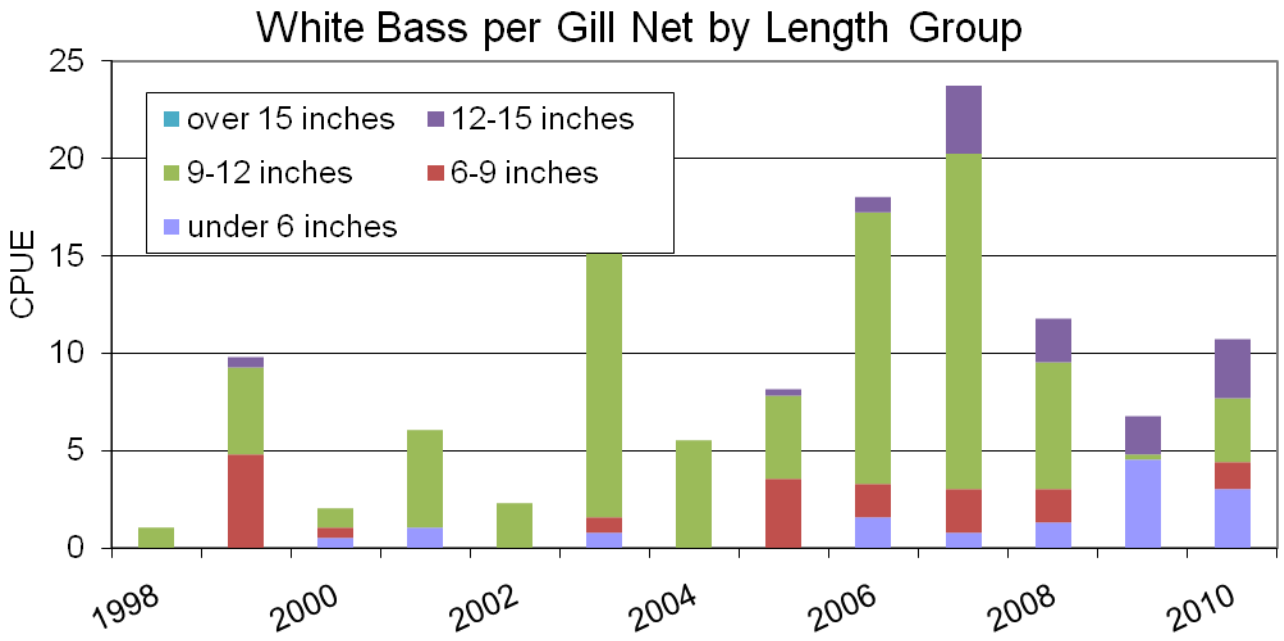
The graphs show the total number of fish caught per net and the relative abundance of fish within several length categories as well as annual mean elevation and storage capacity. Also included is a brief summary of some historical angler creels. The text provides a brief explanation of the information shown in the graphs.



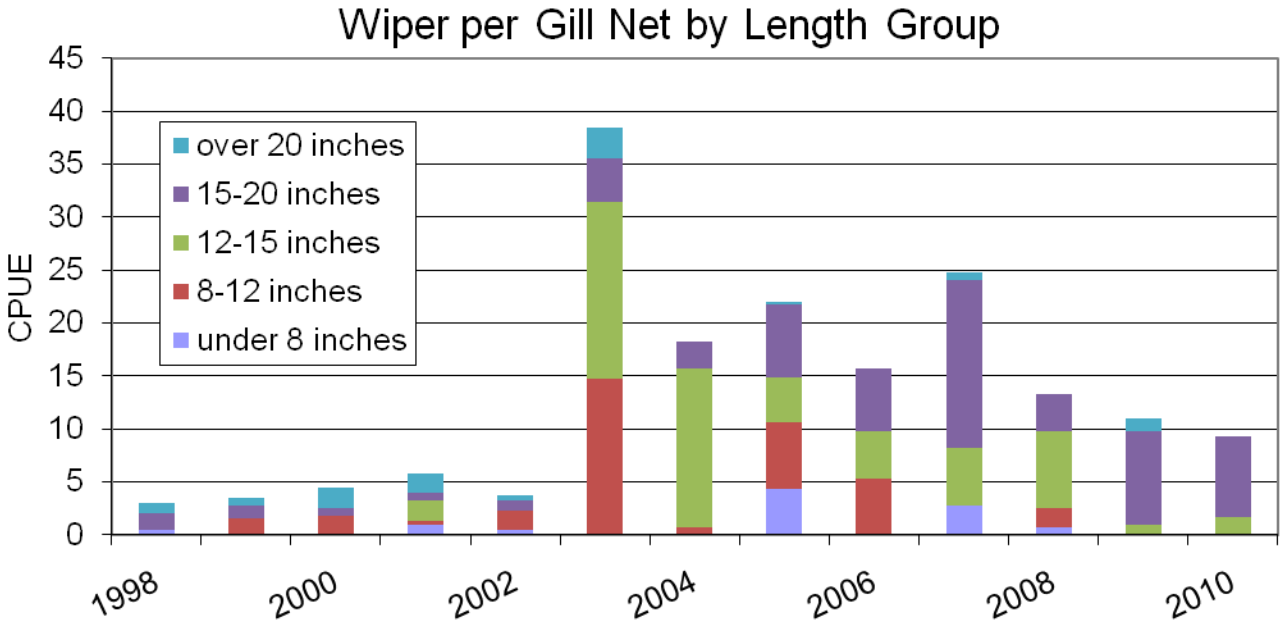
Catch rates for walleye were up in 2010 with just over 7 fish per net. Approximately half of those fish were 15-20 inches long. It is important to note that due to low water levels, fish have been concentrated which may be reflected in higher catch rates in 2010. Biologists will not stock fish in 2011 because of the low water level. An aggressive walleye and panfish management strategy will be enacted when the lake level recovers.



Channel catfish numbers were up in 2010 with values of 7 fish per gill net. These fish were evenly distributed among all size classes. Increased catch rates may have been due to the current low water conditions at Red Willow. Low water likely concentrated fish.

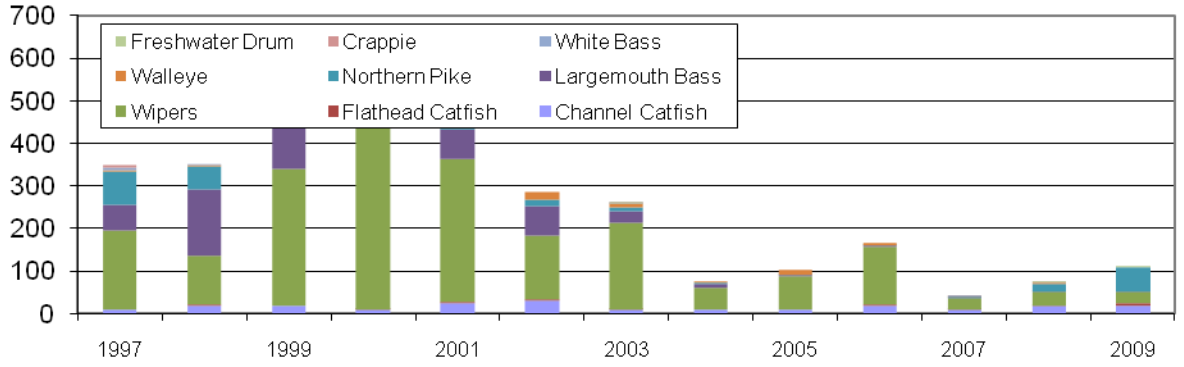


White bass numbers have improved at Red Willow since 2005. Numbers began to drop in 2008 and seem to have stabilized but in reality may be lower than indicated. Generally speaking, fish catch rates often increase after a dramatic decline in water level. There was an increase in numbers in 2010, but not a large increase which might indicate that white bass numbers were stable or maybe even declining. White bass typically respond well when the water levels recover.



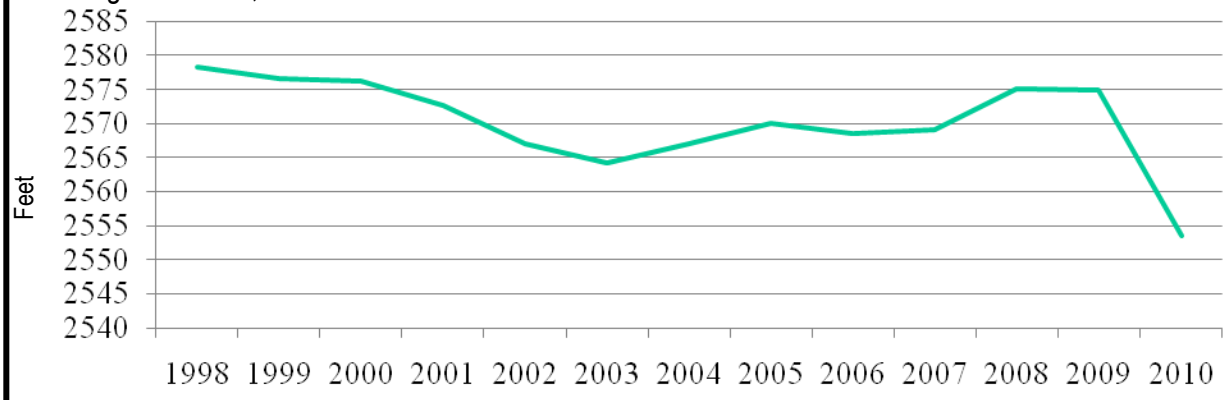
Red Willow historically has been the best wiper fishery of the four Southwest reservoirs. Numbers have been strong with a generous portion of sampled fish greater than 15 inches. Catch numbers have been on the decline since 2007 and dropped below 10 fish per net in 2010. Due to its history as a trophy wiper fishery, we will continue to stock wipers once the lake level has recovered.

Master Angler Awards, Red Willow Reservoir 1994-2008 (2009 data not yet available)



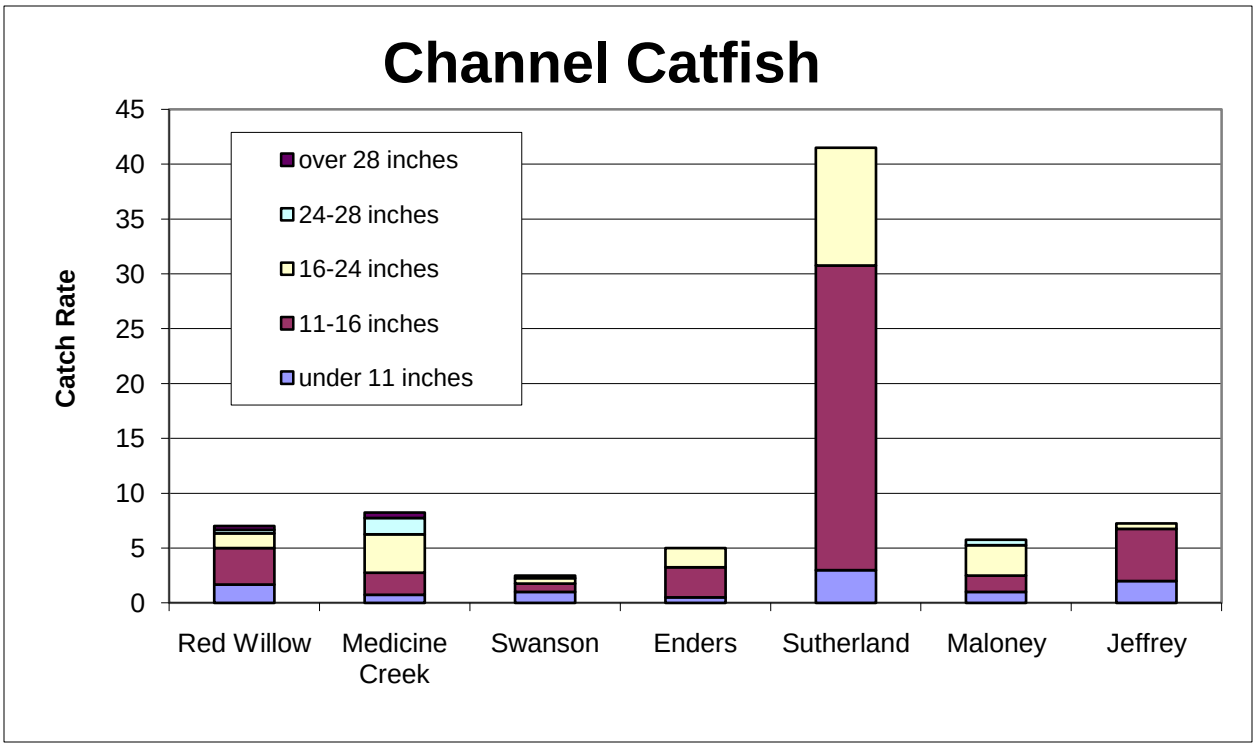
While the numbers of Master Angler (M.A.) awards given may not necessarily represent the true number of large fish caught (but not reported), the information can be useful for evaluating catch trends of trophy fish. In 2009 there were 16 channel catfish, 7 flathead catfish, 25 wipers, and 57 northern pike submitted for M.A. awards.

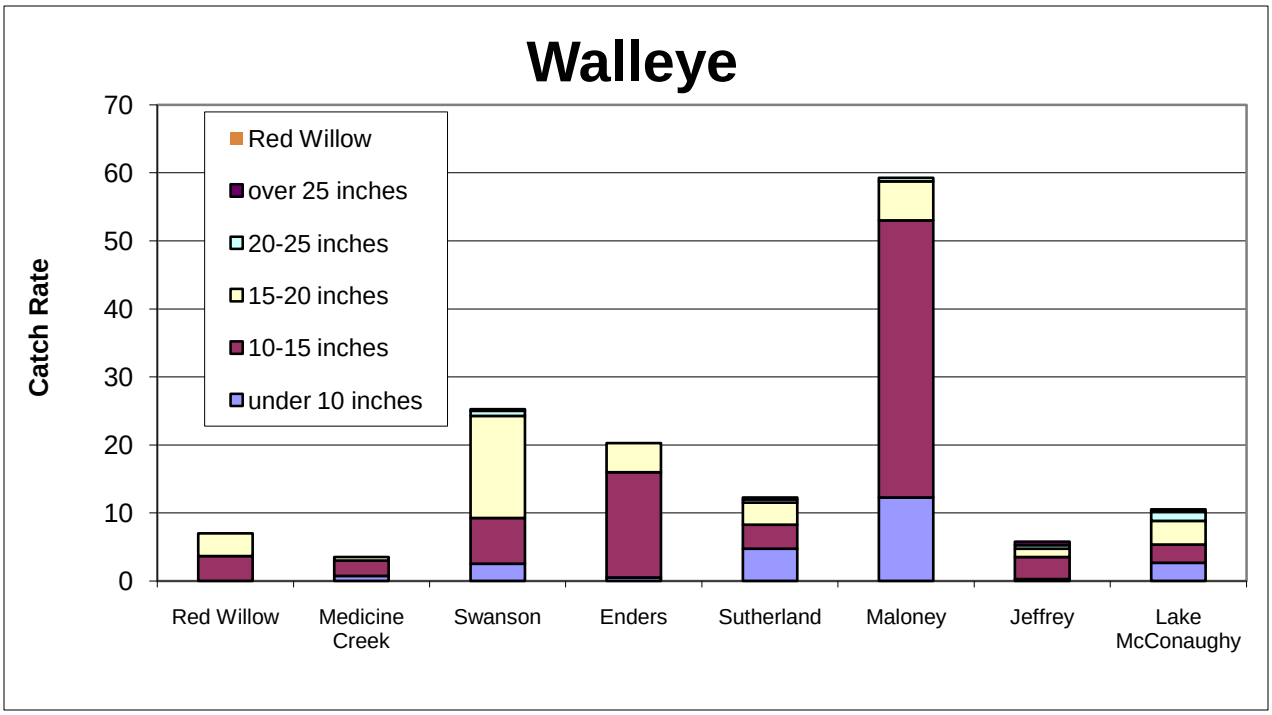
Average Elevation, Red Willow Reservoir 1996-2007

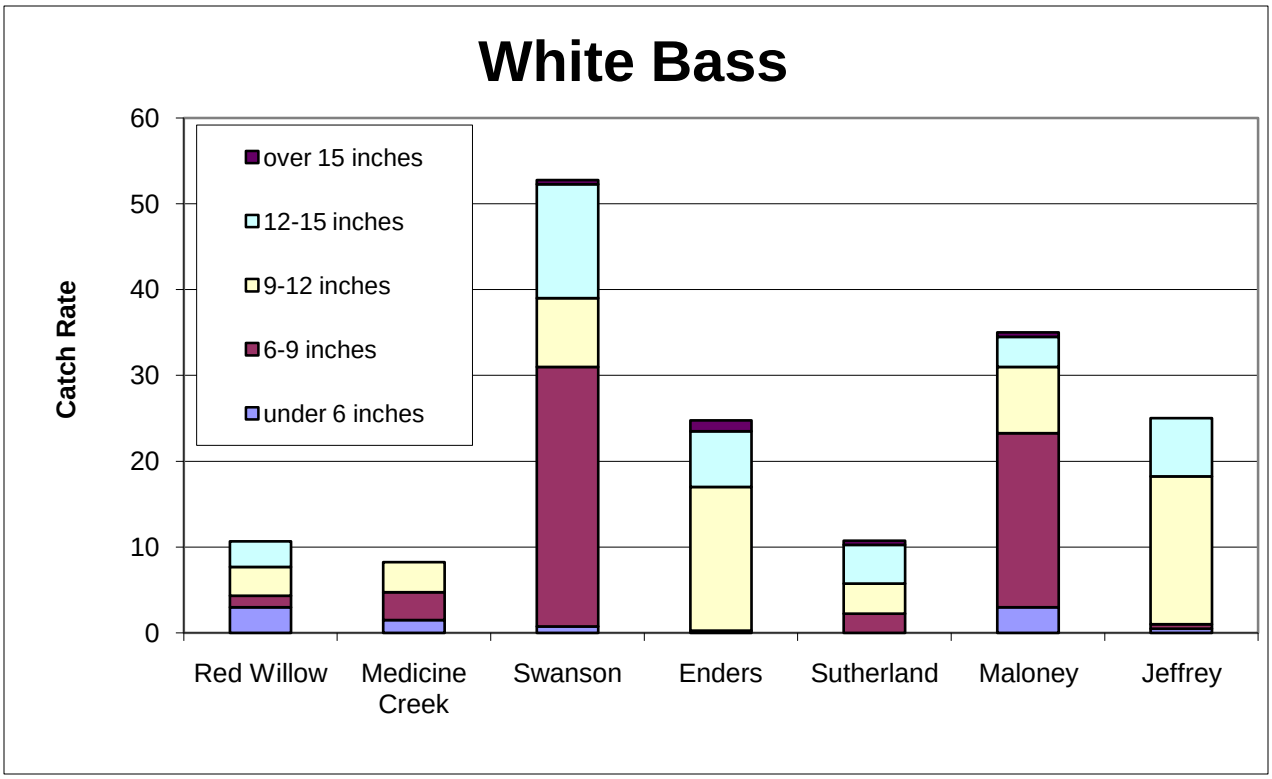


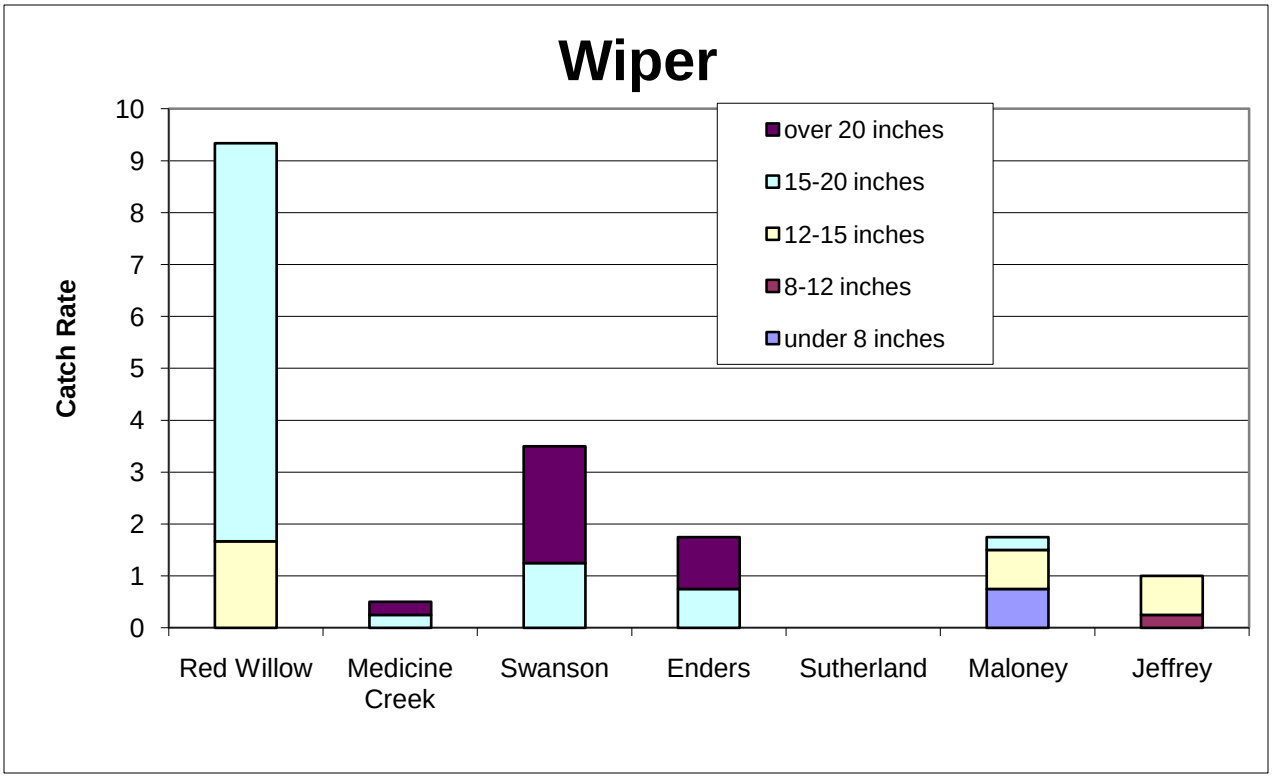
Aerial photo of Red Willow Reservoir taken 2-16-2010

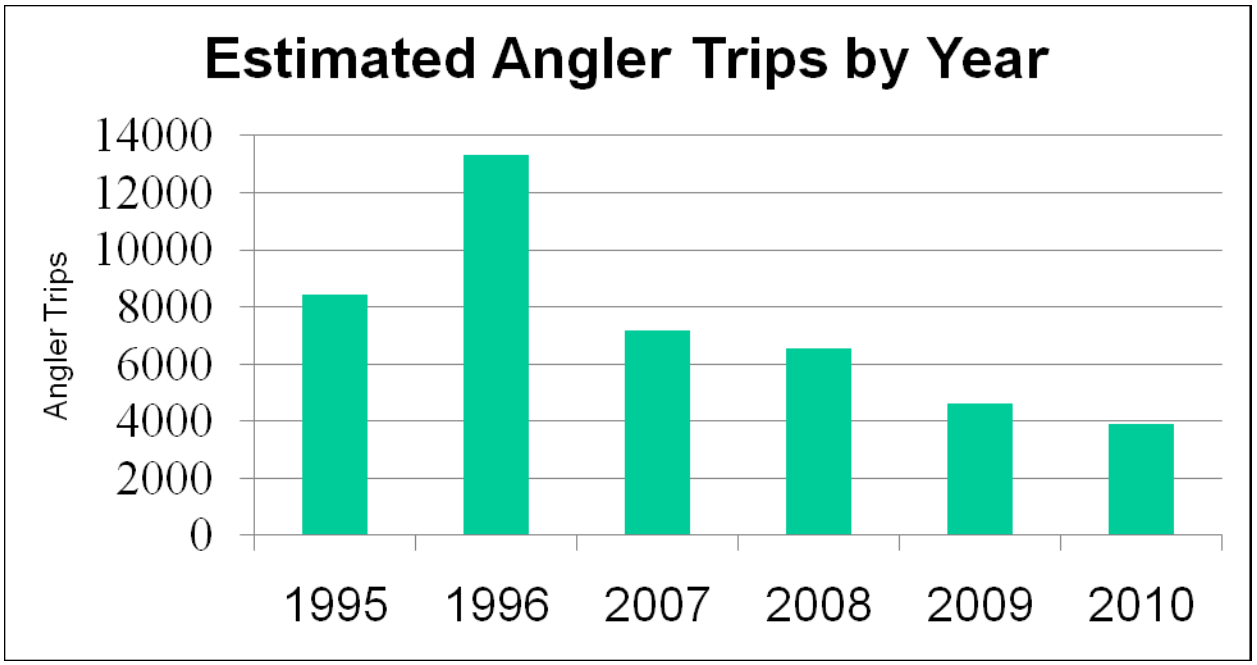
The following graphs compare 2010 walleye, white bass, wiper and channel catfish gill net catch rates between Southwest District Reservoirs.



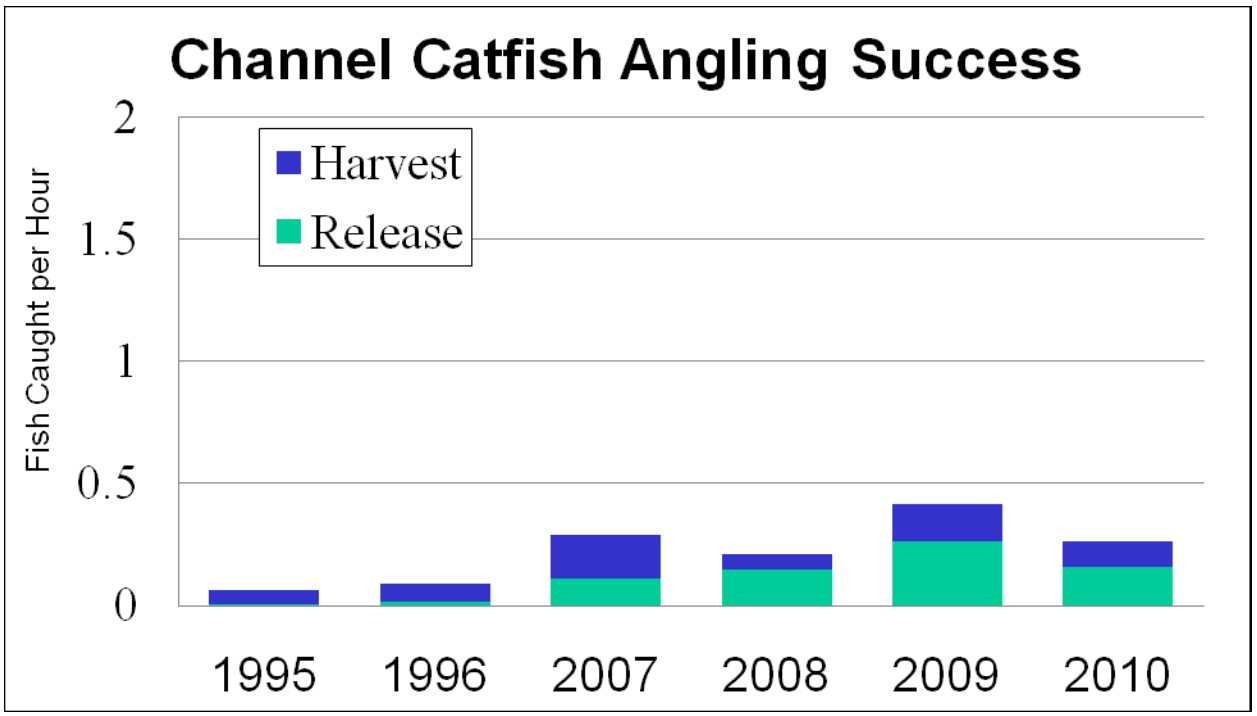



White Bass
Catch Rate
60
50
40
30
20
10
0
over 15 inches
12-15 inches
9-12 inches
6-9 inches
under 6 inches
Red Willow
Medicine Creek
Swanson
Enders
Sutherland
Maloney
Jeffrey

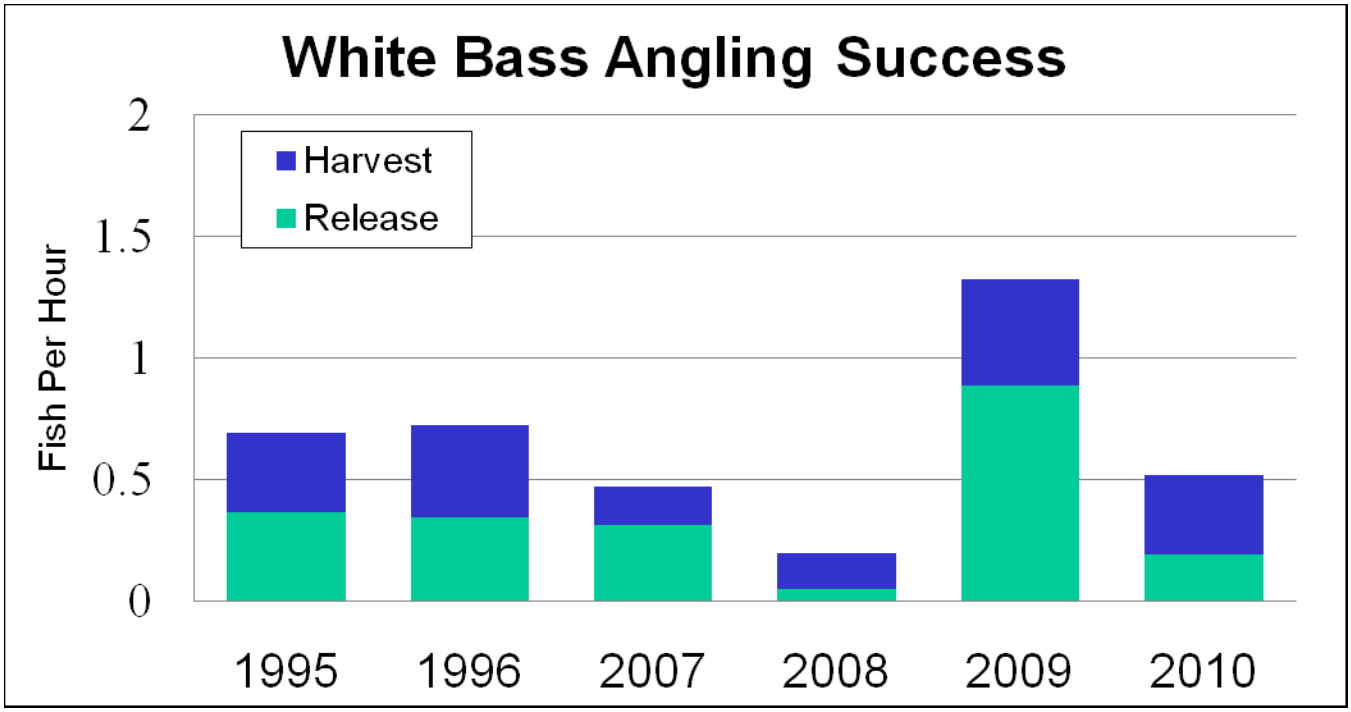

Wiper
Catch Rate
10
9
8
7
6
5
4
3
2
1
0
over 20 inches
15-20 inches
12-15 inches
8-12 inches
under 8 inches
Red Willow
Medicine Creek
Swanson
Enders
Sutherland
Maloney
Jeffrey



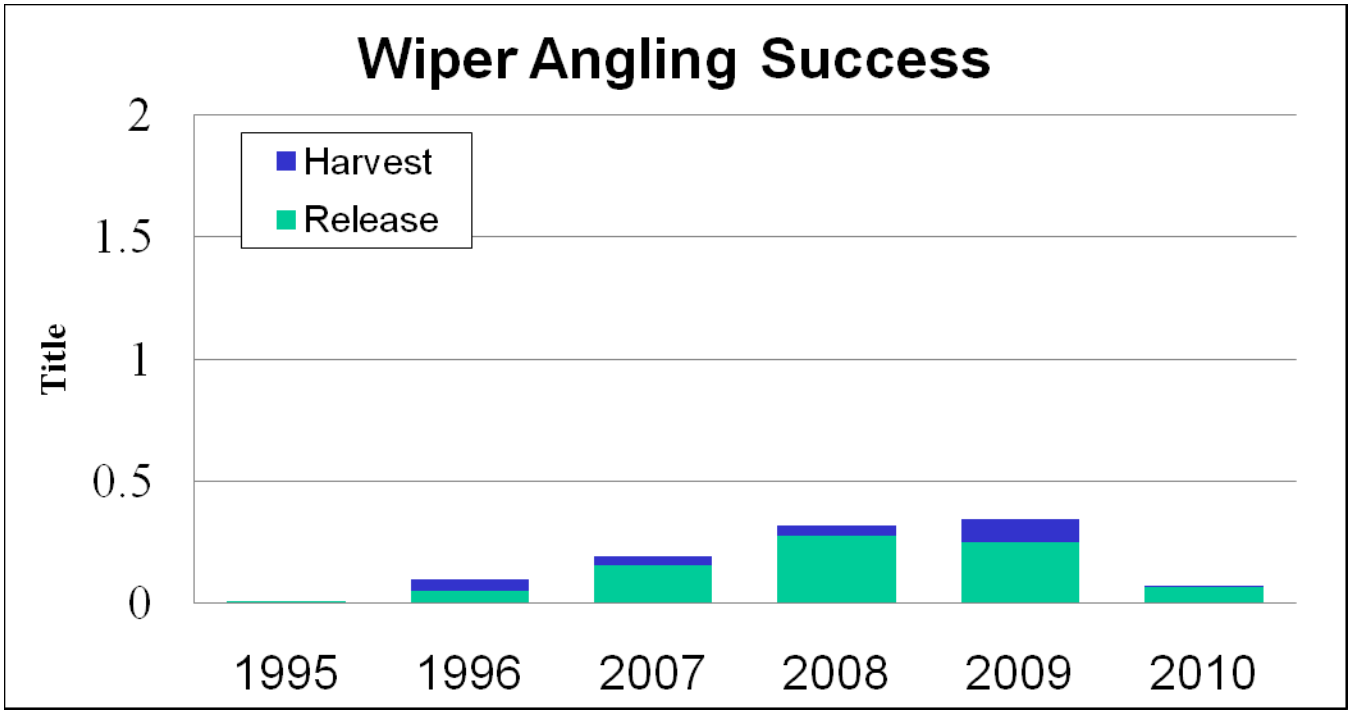
This graph depicts the estimated number of anglers at Red Willow Reservoir from the beginning of April through October. Angler trips can be highly variable and may change from year to year depending on the quality of the fishery. Overall, visitation was down in recent years when compared to data from the mid 90's.



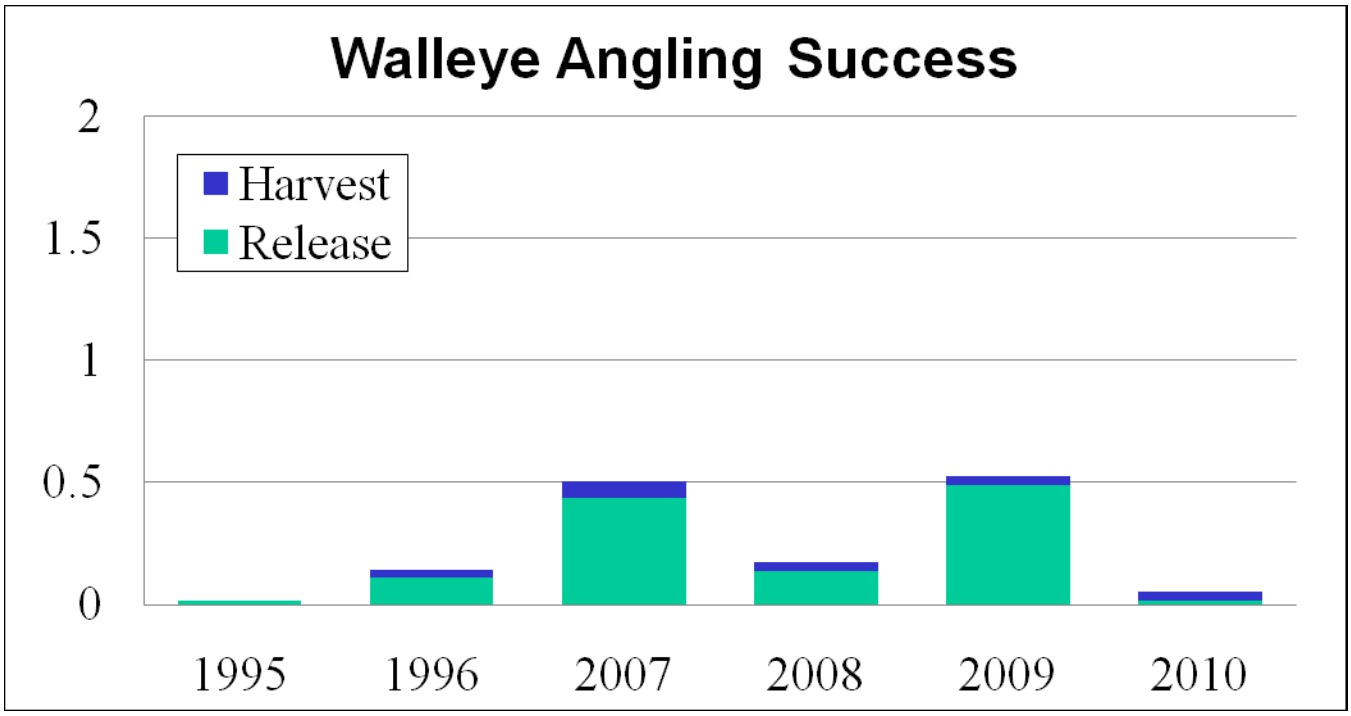
Catfish angling success was measured as the number of channel catfish caught per hour by anglers identifying themselves as channel catfish anglers. A catch rate of 0.25 fish per hour is about average.



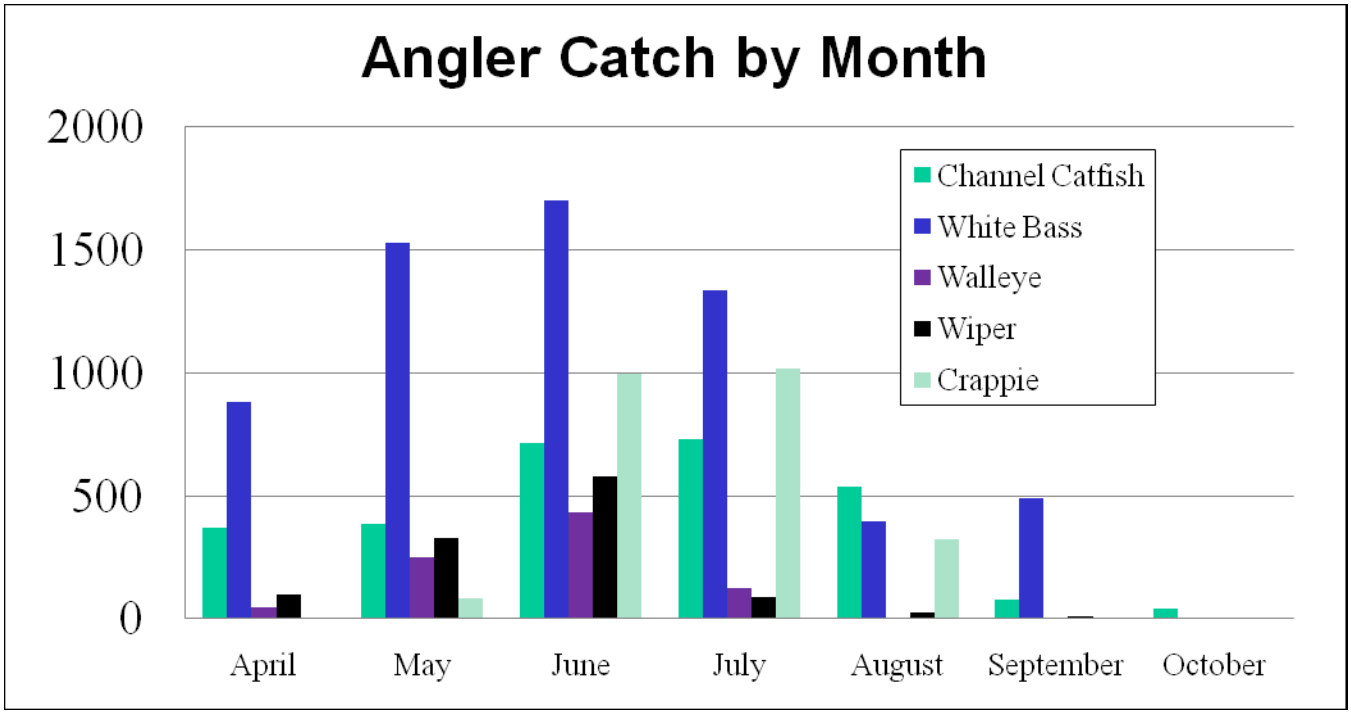
White bass angling success was measured as the number of white bass caught per hour by anglers identifying themselves as white bass anglers. A catch rate of 0.25 fish per hour is about average. Angler catch of white bass is usually variable due to fluctuating fish populations and the fact that few anglers actually target white bass.



Wiper angling success was measured as the number of wiper caught per hour by anglers identifying themselves as wiper anglers. A catch rate of 0.25 fish per hour is about average. Angler catch of wiper is usually very low because few anglers indentify themselves as wiper anglers and it is difficult for many anglers to properly identify small- to medium-sized wipers.



Walleye angling success was measured as the number of walleye caught per hour by anglers identifying themselves as walleye anglers. A catch rate of 0.25 fish per hour is about average. We have been right around that goal the last few years. It is interesting to note that the number of fish harvested was greater than fish released in 2010.



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